

**Claims after this response:**

1. (Currently Amended) A method for creating a protocol dependent control path within an instrument ~~system~~ to allow a first client to communicate with the instrument ~~system~~, the method comprising a ~~first~~ control path creation protocol comprising:

causing the instrument ~~system~~ to identify the first client, wherein the first client is configured to invoke a first instrument application that is part of the instrument ~~system~~ and that controls ~~an~~ the instrument ~~that is part of the instrument system~~, the instrument making measurements of signals that are external to the instrument ~~system~~, wherein the first client is configured to communicate with the instrument ~~system~~ using a first client specific protocol, and wherein the first instrument application is configured to communicate with the first client ~~clients~~ using a first instrument application specific protocol;

causing the instrument ~~system~~ to identify the first instrument application with which the first client is configured to communicate;

causing the instrument ~~system~~ to identify the first client specific protocol;

causing the instrument ~~system~~ to identify the first instrument application specific protocol; and

causing the instrument ~~system~~ to automatically create a control path between the first client and the first instrument application, the control path communicating with the first client using the first client specific protocol and communicating with the first instrument application using the first instrument application specific protocol.

2. (Currently Amended) The method as recited in claim 1, further comprising:

causing the instrument ~~system~~ to record the identification of the first client;

causing the instrument ~~system~~ to record the identification of the first instrument application;

causing the instrument ~~system~~ to record the identification of the first client specific protocol; and

causing the instrument ~~system~~ to record the identification of the first instrument application specific protocol.

3. (Currently Amended) The method as recited in claim 1, wherein the first instrument application specific protocol differs from the first client specific protocol.

4. (Currently Amended) The method as recited in claim 1, further comprising:

repeating the ~~first~~ control path creation protocol for the first client and a second instrument application, wherein the second instrument application is configured to communicate using a second instrument application specific protocol and wherein the second instrument application specific protocol differs from the first instrument application specific protocol.

5. (Currently Amended) The method as recited in claim 1, further comprising:

repeating the ~~first~~ control path creation protocol for a second client and the first instrument application, wherein the second client is configured to communicate using a second client specific protocol and wherein the second client specific protocol differs from the first client specific protocol.

6. (Currently Amended) The method as recited in claim 1, further comprising:

repeating the ~~first control path creation~~ protocol for a second client and a second instrument application, wherein the second client is configured to communicate using a second client specific protocol, wherein the second instrument application is configured to communicate using a second instrument application specific protocol, and wherein the second client specific protocol differs from the first client specific protocol.

7. (Previously Presented) The method as recited in claim 6, wherein the second instrument application specific protocol differs from the first instrument application specific protocol.

8. (Currently Amended) A computer readable memory device embodying a computer program, the program causing a computer within an instrument system to:

cause the instrument ~~system~~ to obtain identification of a client, wherein the client is configured to invoke an instrument application that controls ~~the an~~ instrument ~~that is part of the instrument system~~, the instrument making measurements of signals that are external to the instrument ~~system~~, wherein the client is configured to communicate with the instrument ~~system~~ using a client specific protocol, and wherein the instrument application communicates with ~~the client clients~~ using an instrument application specific protocol;

cause the instrument ~~system~~ to identify the instrument application;

cause the instrument ~~system~~ to identify the client specific protocol;

cause the instrument ~~system~~ to identify the instrument application specific protocol; and

automatically cause the instrument ~~system~~ to create a control path between the client and instrument application.

9. (Currently Amended) The computer readable memory as recited in claim 8, the computer program further causing the computer to:

cause the instrument ~~system~~ to record the identification of the client;

cause the instrument ~~system~~ to record the identification of the instrument application;

cause the instrument ~~system~~ to record the identification of the client specific protocol, and

cause the instrument ~~system~~ to record the identification of the instrument application specific protocol.

10. (Previously Presented) The computer readable memory as recited in claim 8, wherein the instrument application specific protocol differs from the client specific protocol.

11. (Currently Amended) A computer readable memory device embodying a computer program of instructions comprising a first set of instructions causing a computer within an instrument ~~system~~ to:

cause the instrument ~~system~~ to identify a client, wherein the client is configured to invoke a first instrument application that controls the ~~an~~ instrument ~~that is part of the instrument system~~, the instrument making measurements of signals that are external to the instrument ~~system~~, wherein the client is configured to communicate with the instrument ~~system~~ using a client specific protocol, and wherein the first instrument application communicates with the client ~~clients~~ using a first instrument application specific protocol;

cause the instrument ~~system~~ to identify the first instrument application;

cause the instrument ~~system~~ to identify the client specific protocol;

cause the instrument ~~system~~ to identify the first instrument application specific protocol; and

automatically cause the instrument to create ~~creating~~ a control path between the client and the first instrument application;

the instructions further comprising:

repeating the first set of instructions for the client and a second instrument application, wherein the second instrument application is configured to communicate with the client ~~clients~~ using a second instrument application specific protocol and wherein the second instrument application specific protocol differs from the first instrument application specific protocol.

12. (Currently Amended) A computer readable memory device embodying a computer program of instructions comprising a first set of instructions causing a computer within an instrument ~~system~~ to:

cause the instrument ~~system~~ to identify a first client, wherein the first client is configured to invoke an instrument application that controls the an ~~an~~ instrument ~~that is part of the instrument system~~, the instrument making measurements of signals that are external to the instrument ~~system~~, wherein the first client is configured to communicate with the instrument ~~system~~ using a first client specific protocol, and wherein the instrument application communicates with the first client ~~clients~~ using an instrument application specific protocol;

cause the instrument ~~system~~ to identify the instrument application;

cause the instrument ~~system~~ to identify the first client specific protocol;

cause the instrument ~~system~~ to identify the instrument application specific protocol; and

automatically cause the instrument to create a control path between the first client and the instrument application;

the instructions further comprising:

repeating the first set of instructions for a second client and the instrument application, wherein the second client is configured to communicate with the instrument ~~system~~ using a second client specific protocol and wherein the second client specific protocol differs from the first client specific protocol.

13. (Currently Amended) A computer readable memory device embodying a computer program of instructions comprising a first set of instructions causing a computer within an instrument system to:

cause the instrument ~~system~~ to identify a first client, wherein the first client is configured to invoke a first instrument application that controls ~~an the~~ instrument that is part of the instrument system, the instrument making measurements of signals that are external to the instrument ~~system~~, wherein the first client is configured to communicate with the instrument ~~system~~ using a first client specific protocol, and wherein the first instrument application communicates with the first client ~~clients~~ using a first instrument application specific protocol;

cause the instrument ~~system~~ to identify the first instrument application;

cause the instrument ~~system~~ to identify the first client specific protocol;

cause the instrument ~~system~~ to identify the first instrument application specific protocol; and

automatically cause the instrument to create a control path between the first client and the first instrument application;

the instructions further comprising:

repeating the first set of instructions for a second client and a second instrument application, wherein the second client is configured to communicate with the instrument ~~system~~ using a second client specific protocol, wherein the second instrument application is configured to communicate with clients using a second instrument application specific protocol, and wherein the second client specific protocol differs from the first client specific protocol.

14. (Previously Presented) The computer readable memory as recited in claim 13, wherein the second instrument application specific protocol differs from the first instrument application specific protocol.

15. (Currently Amended) A system comprising:

a management logic module configured to obtain identification of a first client, to obtain identification of a first instrument application that controls an instrument making measurements of signals that are external to the instrument, to obtain identification of a first client specific protocol, to obtain identification of a first instrument application specific protocol, and to automatically create a control path between the first client and the first instrument application, wherein the first client is configured to invoke the first instrument application, wherein the first client is configured to communicate using a client specific protocol, wherein the first instrument application is configured to communicate using the first instrument application specific protocol, and wherein the first instrument application specific protocol differs from the first client specific protocol.

16. (Previously Presented) The system as recited in claim 15, wherein the control path comprises:

a communication logic module configured to receive communications from the first client which conform to the first client specific protocol, to translate such communications into communications to which the first instrument application is configured to understand and to which the first instrument application is configured to appropriately react, and to transfer the translated communications to the first instrument application.

17. (Previously Presented) The system as recited in claim 16, wherein the communication logic module comprises:

a server logic module configured to receive the communications from the first client; and

a translator logic module configured to receive the communications from the server logic module and to translate the received communications into communications to which the first instrument application is configured to understand and to which the first instrument application is configured to appropriately react, and to transfer the translated communications to the first instrument application.

18. (Previously Presented) The system as recited in claim 16, wherein the system further comprises:

wherein the first instrument application comprises a virtual instrument and an application component logic module and wherein the virtual instrument is configured to receive communications from the communication logic module and to perform any additional translation of the communications into communications to which the application component logic module is configured to understand and to which the application component logic



module is configured to appropriately react, and to transfer such communications to the application component logic module.

19. (Original) The system as recited in claim 16, wherein the system further comprises:

an additional communication logic module configured to receive additional communications from an additional client which conform to an additional client specific protocol, to translate such additional communications into communications to which an additional application is configured to understand and to which the additional application is configured to appropriately react, and to transfer the translated additional communications to the additional application.

20. (Original) The system as recited in claim 16, wherein the system further comprises:

an additional communication logic module configured to receive additional communications from an additional client which conform to an additional client specific protocol, to translate such additional communications into communications to which the application is configured to understand and to which the application is configured to appropriately react, and to transfer the translated additional communications to the application.